TREBING + HIMSTEDT

CommDTM DP/PA Link

Doc. Version 4.0

User Manual

English

Dear Customer,

This »User Manual« describes the functionalities of the CommDTM for the SIMATIC® DP/PA Link in a FDT frame application. If you have any further questions, please contact our Technical Support:

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CommDTM DP/PA Link

The SIMATIC® DP/PA Link, frequently used in process control plants, is an essential structural element for the transfer from PROFIBUS DP to PA in complex network structures. The respective CommDTM DP/PA Link developed by Trebing & Himstedt Prozeßautomation GmbH & Co KG can be implemented into all FDT frame applications according to FDT Specification 1.2 + Addendum. There, the DTM functions as a device driver, enabling DP-V1 communication with the devices at the DP/PA Link and their deviceDTMs.

The CommDTM DP/PA Link considerably facilitates configuration, parameterization and calibration, as well as commissioning, diagnosis and maintenance of field devices.

You can use the CommDTM within one FDT frame application severalfold and concurrently (depending on the available DP/PA Links in the PROFIBUS network). To do so, load the CommDTM DP/PA Link severalfold into the project window. For the PROFIBUS DP-V1 communication, a respective physical access to the PROFIBUS and a respective CommDTM PROFIBUS DP-V1 need to be available (see figure 1 on page 5). You can use the Trebing & Himstedt Prozeßautomation GmbH & Co. KG CommDTM PROFIBUS DP-V1 with xEPI 2 or CP5512/CP5611 hardware.

The CommDTM DP/PA Link is protected by software key. You need to license the software for unlimited use (see »Licensing« on page 15). Without licensing, you can use the CommDTM DP/PA Link as a demo version with full functionality for 30 days from date of installation. CommDTM DP/PA Link functionalities can be accessed through the context menu of the used FDT frame application.

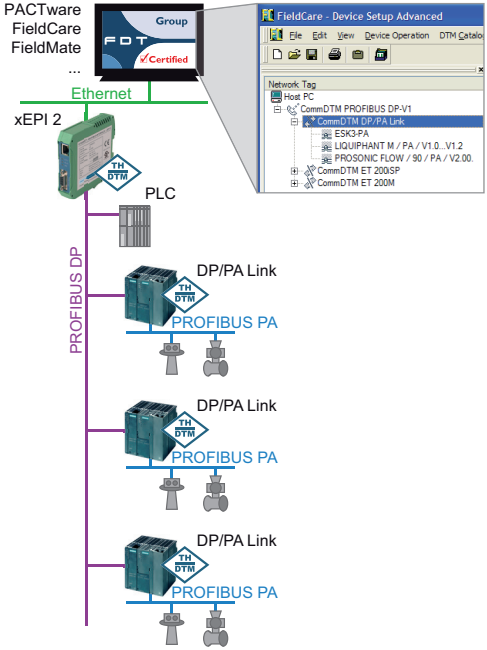

Fig. 1: Example of PROFIBUS network with several DP/PA Links

FDT Frame Applications

The different FDT frame applications vary in functionality and appellation of the various functions. This user manual refers to the »FieldCare« frame application with regard to appellations. Complete functions for the frame application are described in the FieldCare Help.

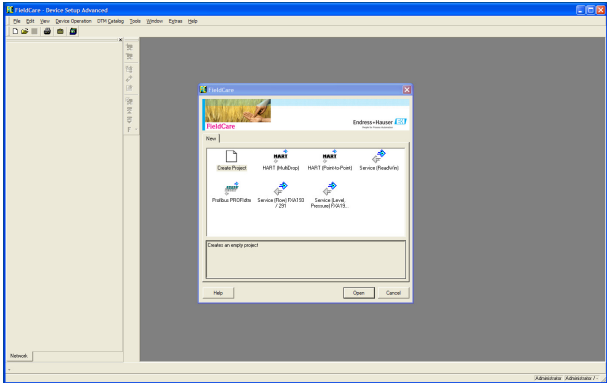

Fig. 2: FieldCare

Context Menu

Click an entry in the project window of the FDT frame application with the right mouse key. The context menu opens. Its entries are default entries of the FDT frame application. When you select **`Additional Functions`**, the respective DTM entries are displayed. Functionalities displayed in gray are not supported or already opened. To select these functions, an online connection might be necessary. Integration of the CommDTM DP/PA Link into a project is described in the chapter »Example Application«.

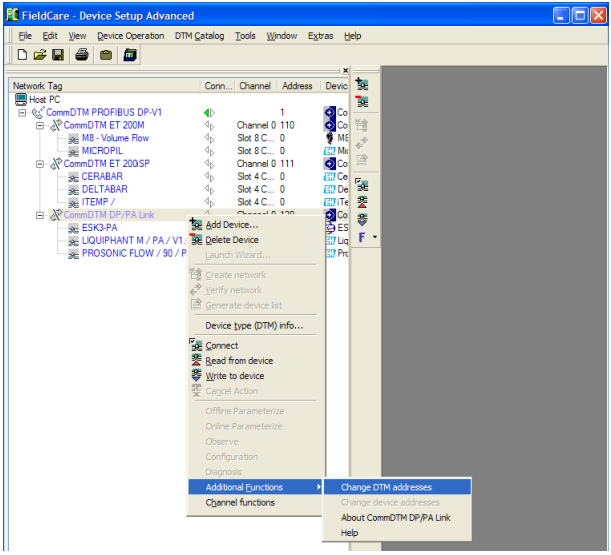

Fig. 3: Context menu for the CommDTM DP/PA Link

Change Device Addresses

With this function, you can display and change the device addresses of the field devices connected to the DP/PA Link. To use this function, the CommDTM DP/PA Link needs to be online. Field device addresses can only be changed if the respective field device supports this function.

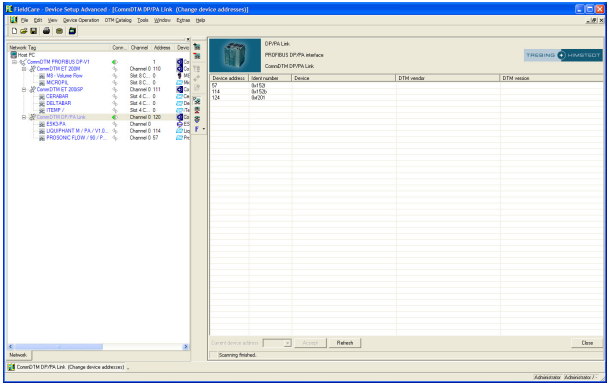

Fig. 4: Change device addresses

Procedure for changing device address:

– Click **`CommDTM DP/PA Link`** in the project window with the right mouse key and select **`Establish Connection`**. The existing online connection is displayed in the FDT frame application (see Help for »FDT Frame Application«).

– Click **CommDTM DP/PA Link** in the project window with the right mouse key and select **Additional Functions > Change device addresses**. The scan procedure for connected field devices is performed by clicking the **Refresh** button. Afterwards the field devices are listed in the **Change device addresses** window. Respective device names, DTM vendors and DTM versions can only be displayed if this functionality is supported by the frame application.
– Mark the respective field device.
– Select a new address from the list box **Current device address** in the bottom part of the window and click **Accept**. Automatically, an online connection to the field device is established, the address is modified, and the field device disconnected. In the status bar of the window, information is displayed on whether this function has been completed successfully, or whether the field device does not support this functionality.

Attention!
After device address modification, you need to set the DTM address of the respective deviceDTM to the same address.

Note!
Not all devices support device address setting through the CommDTM DP/PA Link. Device addresses for some field devices can only be set directly at the field device. For respective information, please refer to the manual of the respective field device vendor.

DTM Addresses

Setting DTM Address

Procedure for setting DTM address:

– Click **CommDTM DP/PA Link** in the project window with the right mouse key and select the function **Add device**.
– Select a device from the device catalog and click **OK**.
The window for setting DTM addresses opens.
– Set the DTM address and click **OK**.

Change DTM Addresses

This functionality serves to display and to set the DTM addresses of the field deviceDTMs. This function is only available in offline mode.The DTM address shown and set is used to establish connection to the respective field device. Please make sure to use an identical address both for the field device and for its respective DTM.

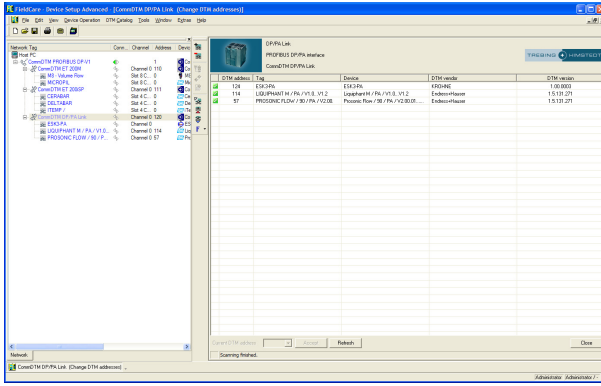

Fig. 5: Change DTM addresses

Procedure for changing DTM address:

– Click **CommDTM DP/PA Link** in the project window with the right mouse key and select **Additional Functions > Change DTM addresses**. The scan procedure is performed by clicking the **Refresh** button. Afterwards the devices are listed in the **Change DTM addresses** window. Respective device names, DTM vendors and DTM versions can only be displayed if this functionality is supported by the frame application.
– Mark the respective DTM.

– Click into the list box **Current DTM address** and click **Accept**. In the status bar of the window, information is displayed on whether this function has been completed successfully, or whether the DTM does not support this functionality.

Note!

This function is not supported by all DTM. In this case, you can only modify DTM addresses directly through the field deviceDTM in the project.

About CommDTM DP/PA Link

This functionality displays information about the installed CommDTM DP/PA Link.

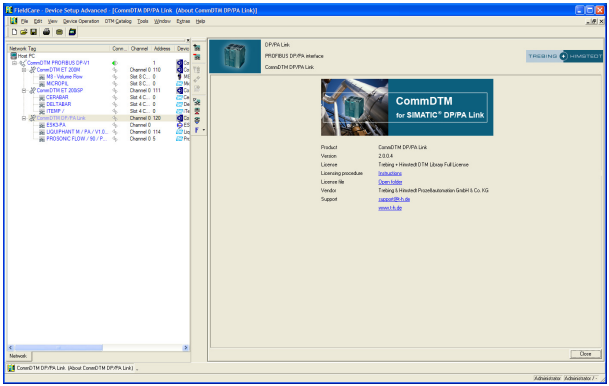

Fig. 6: About CommDTM DP/PA Link

Procedure for opening the window About CommDTM ET 200M:

– Click **`CommDTM DP/PA Link`** in the project window with the right mouse key and select **`Additional Functions > About CommDTM DP/PA Link`**. The information about the CommDTM DP/PA Link opens.

Help

This function starts the »User Manual« in PDF format. Adobe Acrobat Reader is required. Installation of the Trebing + Himstedt DTM Library saves the user manual locally on your system.

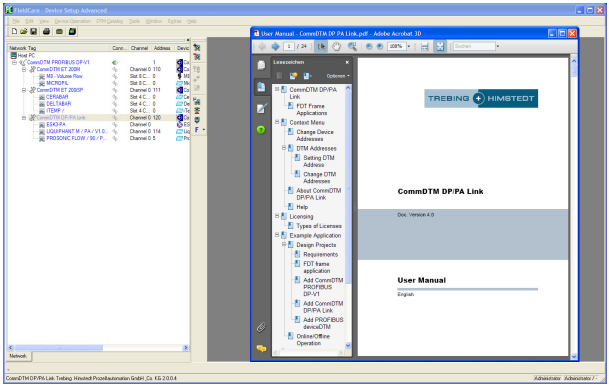

Fig. 7: User Manual

Licensing

The CommDTM DP/PA Link is protected by software key. You need to license the software for unlimited use. Without licensing, you can use the CommDTM DP/PA Link as a demo version with unlimited functionality for 30 days from date of installation. After expiry of the 30 day demo version, online connections can no longer be established. Online connections existing at the time of expiration will be terminated.

Note!

The license is generated for the current system. License transfer to other systems is not possible. You can find the current license status in the window **About CommDTM DP/PA Link** (context menu: **> Additional Functions > About CommDTM DP/PA Link**).

Types of Licenses

In the following table you find an overview of the types of licenses.

Type of license	Explanation
Demo version (... days without functional limitations remaining)	DTM is not licensed.
Trebing + Himstedt DTM Library Full License	License valid for all DTMs from the Trebing + Himstedt DTM Library.
Trebing + Himstedt DTM Library Single License	Lizenz valid for one DTM from the Trebing + Himstedt DTM Library.
No license (demo version expired)	Online connection cannot be established.
Endress + Hauser OEM License	Please ask your distributor for specific OEM licenses.

Example Application

The CommDTM DP/PA Link allows access to PROFIBUS PA field devices. The PROFIBUS communicates acyclically via a MCL2 configuration master. For communication with field devices, the respective field deviceDTM needs to be integrated into the project of the FDT frame application.

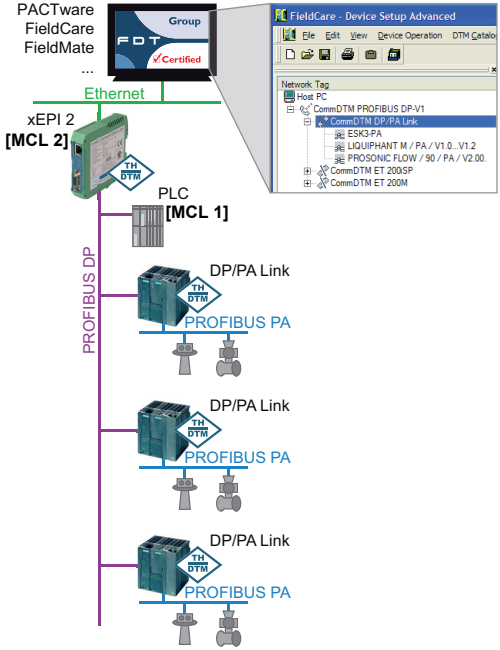

Fig. 8: Communication principle to field devices

Design Projects

Requirements

The following software has to be installed:

– FDT frame application
– Trebing + Himstedt DTM Library
– PROFIBUS PA field deviceDTM

FDT frame application

– Start the FDT frame application.
– Open and update the device catalog.
– Create a new project.

Add CommDTM PROFIBUS DP-V1

– Click **`Host PC`** in the project window with the right mouse key and select the function **`Add device`**.
– Select **`CommDTM PROFIBUS DP-V1`** from the device catalog and click **`OK`**.
– Configure the CommDTM PROFIBUS DP-V1. To do so, open the CommDTM PROFIBUS DP-V1 context menu and select **`Configuration`**. For further information, please turn to the CommDTM PROFIBUS DP-V1 user manual.

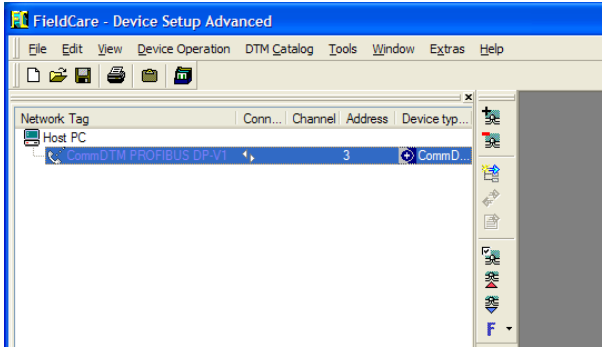

Fig. 9: Added CommDTM PROFIBUS DP-V1

Add CommDTM DP/PA Link

– Click **`CommDTM PROFIBUS DP-V1`** in the project window with the right mouse key and select the function **`Add device`**.

– Select **`CommDTM DP/PA Link`** from the device catalog and click **`OK`**. The window for setting DTM addresses opens.

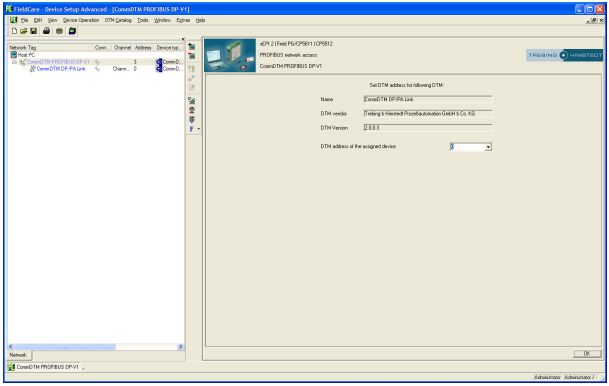

Fig. 10: Set DTM addresses

– Set the DTM address and click **OK**.

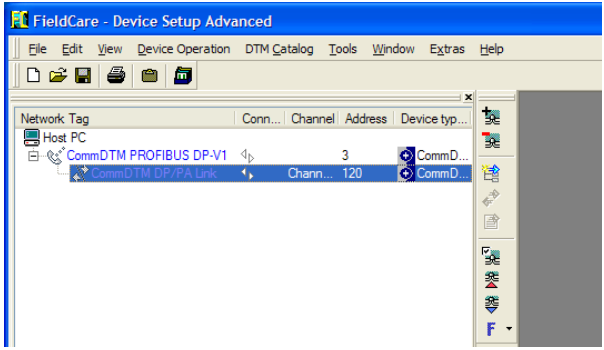

Fig. 11: Added CommDTM DP/PA Link

Add PROFIBUS deviceDTM

Up to 64 PROFIBUS PA field devices can be connected to one DP/PA Link. Likewise, up to 64 field deviceDTMs can be intergated into the project.

– Click **`Comm DTM DP/PA Link > Add Device`** with the right mouse key.
– Select the **`deviceDTM`** from the device catalog and click **`OK`**. The window for setting DTM addresses opens.
– Set the DTM address and click **`OK`**.
– Establish an online connection (see »Online/Offline Operation« on page 24).

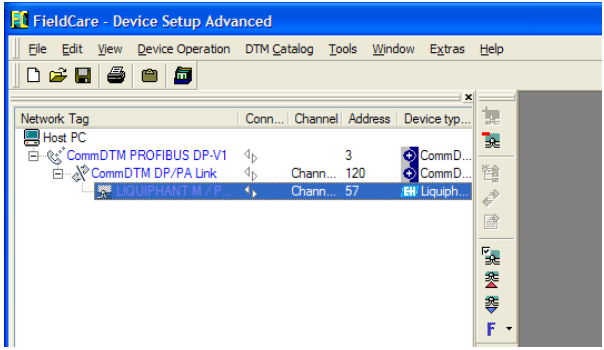

Fig. 12: Added field deviceDTM

Online/Offline Operation

– Establish an online connection to the PROFIBUS. To do so, click on an entry in the project window with the right mouse key and select **`Go Online`**. The existing online connection is shown in the FDT frame application (see »FDT Frame Application Help«).
– Depending on the selected device, you can now read out the configuration, or write the configuration set in the FDT frame application to the device. To do so, use the respective function in the context menu.
– Terminate the online connection by clicking on the respective entry in the project window with the right mouse key and selecting **`Go Offline`**.

Note!
You need to establish connection for each field device. You can terminate the connection for each single field device. The connection is established and terminated via the context menu of the respective field deviceDTM.

If you terminate connection to the CommDTM DP/PA Link or to the CommDTM PROFIBUS DP-V1, all online connections to the field devices are terminated automatically.

General Conditions

Right to make additions or alterations

Trebing & Himstedt Prozeßautomation GmbH & Co. KG reserves the right to continue development of this user manual and the properties of the hardware and software at any time, also without releasing information about this or about alterations prior to doing so.

Exclusion from liability

Trebing & Himstedt Prozeßautomation GmbH & Co. KG assumes no warranty for proper function of the hardware and software in all conceivable situations. Currently available technical means do not enable the development of software which is completely free of errors in all conceivable applications. Trebing & Himstedt Prozeßautomation GmbH & Co. KG does not accept any liability for damages, both direct and indirect, arising from the use of the hardware and software and the information contained in this user manual.

Duty to monitor products

As part of our duty to monitor products, we strive to warn about dangers we have identified which can result from the interaction of hardware and software and product use with third-party products. Monitoring is only possible if we receive sufficient information from our customers on the planned application(s) and the existing hardware and software components. As a result of the complex interactions, it is no longer possible for us to accurately identify all dangers and to check the effect on the overall system and in particular on our hardware and software, if the conditions of application have changed and/or hardware or software has been exchanged. This user manual does not describe all technical characteristics of the hardware and software and their variants. For more information please contact Trebing & Himstedt Prozeßautomation GmbH & Co. KG.

Warranty

Our products are subject to warranty in accordance with our general business and delivery terms.